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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ANYASO, UCHENDU O	
ART UNIT	**PAPER NUMBER**
2675	3

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/055,879	WANG ET AL.	
	Examiner	Art Unit	
	Uchendu O Anyaso	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are pending in this action.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/055,906. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications lay claim to such limitations as a display observation angle of which is multidirectionally adjustable, said display comprising: a housing and a transmission mechanism, a display unit being disposed in the panel, the panel and wherein the transmission mechanism operates to multidirectionally turn the panel. A comparison of the claims are shown below:

Claim 1 of Application No. 10/055,906	Claim 1 of this Application No. (10/055,879)
1. Display observation angle of which is multidirectionally adjustable, said display comprising: a panel control system, a panel,	1. Display panel transmission structure capable of multidirectionally adjusting observation angle of the display panel,
a housing and a transmission mechanism, a display unit being disposed in the panel, the panel and the transmission mechanism being received in a layout	said transmission structure comprising: a housing including an upper casing and a lower casing, a main circuit control board being received in the upper casing, the upper and lower

space of the housing, at least one side of the panel being pivotally connected with the transmission mechanism, the panel control system including	casings defining a layout space in which the display panel and a transmission mechanism are movably received, a base board being slidably disposed on the lower casing, a transmission guide member being disposed on the base board for guiding the transmission mechanism in sliding; a display panel in which a liquid crystal unit is disposed, one side of the display panel being drivingly pivotally connected with the transmission mechanism; and a transmission mechanism composed of several gear sets mounted on a base seat, each gear set being directly or indirectly controlled and driven by at least one motor to drivingly operate multiple gears, one gear set being engaged with a gear disposed in the display panel, whereby by means of rotation of the gear set, the display panel can be swung forward downward or backward upward, at least one gear set being movably assembled with the guide member on the base board,
a program processing unit for turning on/off the transmission mechanism, a command input unit for giving control signal to the program processing unit and a mechanical position detection unit for always sensing the operation state of the transmission mechanism, the program processing unit storing therein various set modes for activating the transmission mechanism to operate, whereby via the command input unit,	whereby under control of the main circuit control board, the motor can forward and backward operate to simultaneously rotate the gear sets clockwise and counterclockwise so as to extend the display panel out of the housing or retract the display panel into the layout space of the housing,
an operation command can be input to make the program processing unit according to the selected command take out a corresponding operation mode and send the signal to the transmission mechanism and make transmission mechanism operate to multidirectionally turn the panel.	after the display panel being extended out of the housing, the main circuit controlling the motor of a gear set to micro-rotate and make an opposite gear set rotate in the same direction, whereby the display panel is swung leftward or rightward.

The instant invention does not explicitly recite the claim limitation of a program processing unit as is claimed by Application No. 10/055, 906. However, in this instance, presently pending claims comprise a "main circuit control" that is functionally similar to the programming processing unit of Application No. 10/055, 906's claims. Application No. 10/055, 906's claims are broader than the instant application and functionally encompass the limitations

found in presently pending claims. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC ' 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuki (US 5,847,685) in view of *Nishio et al* (US Patent Publication 2001/0026247).

6. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Otsuki (US 5,847,685).

Regarding **claim 1,** Otsuki discloses a display observation angle of which is multidirectionally adjustable, said display comprising: a panel control system [i.e. controller], a panel [Fig. 14; 33], a housing [Fig. 14; 20] and a transmission mechanism [Fig. 14; 49], a display unit [Fig. 14; 33] being disposed in the panel, the panel and the transmission mechanism being received in a layout space of the housing, at least one side of the panel being pivotally connected with the transmission mechanism, the panel control system including a main circuit control unit for turning on/off the transmission mechanism, a command input unit [i.e. operation switch] for giving control signal to the circuit control unit (see Column 11, Line 10 - Column 12, Line 32).

However, Otsuki does not teach how the transmission mechanism is composed of several gears. On the other hand, Nishio teaches this concept by teaching a multivision device

configured by stacking a plurality of projection units, which accommodate rear projection projectors, both horizontally and vertically, and that displays one large screen picture by enlarged projection of pictures projected from this multiplicity of projection units wherein these drive devices 60a through 60i used in this system contain a rotary drive device, such as a motor, and a rotary power transmission mechanism. Furthermore, Nishio teaches how the height of the projectors within the projection units and the angle of the projected light can be freely adjusted in the vertical and horizontal directions wherein some examples of such rotary transmission mechanisms are gear trains, chain gears, and cam-to-cam followers (page 7, paragraph 0096).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Otsuki and Nishio because while Otsuki discloses a display observation angle of which is multidirectionally adjustable, said display comprising: a panel control system [i.e. controller], a panel [Fig. 14; 33], a housing [Fig. 14; 20] and a transmission mechanism [Fig. 14; 49], a display unit [Fig. 14; 33] being disposed in the panel, the panel and the transmission mechanism being received in a layout space of the housing, at least one side of the panel being pivotally connected with the transmission mechanism, the panel control system including a main circuit control unit for turning on/off the transmission mechanism, a command input unit [i.e. operation switch] for giving control signal to the circuit control unit, Nishio teaches how the transmission mechanism would be composed of several gears (page 7, paragraph 0096). The motivation for combining these inventions would have been to provide a display device that can be simply adjusted (page 2, paragraph 0028).

Regarding **claims 2 and 3**, in further discussion of claim 1, Otsuki discloses the main circuit control unit is a circuit composed of a processing chip and several electronic elements (see Column 11, Lines 35-54).

Furthermore, Otsuki discloses the mechanical position detection unit is composed of multiple sensing cells respectively disposed on the transmission mechanism and the housing for always detecting the operation state of the gear sets [Fig. 14; 45] or relevant components of the transmission mechanism and sending signals to the program processing unit (see Column 11, Lines 35-54).

Regarding **claim 4,** in further discussion of claim 1, Otsuki discloses the housing includes an upper casing [Fig. 14; 20] and a lower casing [Fig. 14; 21], the upper casing being formed with a receiving space in which the panel control system is disposed, the upper and lower casings defining a layout space in which the display panel and a transmission mechanism are movably received, a base board being slidably disposed on the lower casing, a rack [Fig. 14; 35] and guide channel [Fig. 14; 30] being disposed on the base board for guiding the transmission mechanism in sliding (see Column 11, Line 10 - Column 12, Line 32).

Regarding **claim 5,** in further discussion of claim 1, Otsuki discloses two sides of the base board are formed with ribs [Fig. 14; 35] on which slide blocks [Fig. 8; 42b] are disposed, two sides of the lower casing being formed with slide channels corresponding to the slide blocks, the slide blocks being movable within the slide channels, whereby the base board can slide along the slide channels (see Column 8, Lines 9-52 & Column 11, Line 10 - Column 12, Line 32).

Furthermore, Otsuki discloses a control panel is disposed at one end of the receiving space, on the control panel being disposed a command input unit [i.e. operation switch] composed of multiple press keys for a user to touch and control the functions of the panel of the display (see Column 9, Lines 39-64).

Regarding **claims 6** and **7,** in further discussion of claim 5, Otsuki discloses two opposite hook bodies [Fig. 14; 36] are pivotally disposed on lower side of base board and pulled by resilient members [Fig. 14; 37] to keep in an inward biased state, inner side of each hook body being formed with a guide notch, the base board being formed with guide slots corresponding to and overlapping the guide notches, each guide slot having a close end and an open end, the lower casing being formed with locating posts respectively corresponding to the sliding positions of the guide notches and guide slots, whereby when the base board is slid and retracted into the housing, the close ends of the guide slots abut against the locating posts to restrict the base board, and reversibly, when the base board is slid outward from the housing and the open ends of the guide slots are moved to get close to the locating posts, the guide notches of the hook bodies instantaneously hook and locate the locating posts (see Column 11, Line 10 - Column 12, Line 32).

Furthermore, Otsuki discloses each hook body has a press post, whereby by means of shifting the press posts in a direction reverse to the hooking direction, the locating posts are released from the hooking of the hook bodies (see Fig. 7; Column 6, Lines 14-65).

Regarding **claim 8**, in further discussion of claim 1,Otsuki discloses two racks [Fig. 14; 24 & 35] are disposed on the lower casing corresponding to the two racks of the base board, whereby the racks of the lower casing can extend out from the base board and overlap the racks thereof to cooperatively extend the travel (see Column 11, Line 10 - Column 12, Line 32).

Regarding **claim 9**, in further discussion of claim 1, Nishio teaches this concept by teaching a multivision device configured by stacking a plurality of projection units, which accommodate rear projection projectors, both horizontally and vertically, and that displays one large screen picture by enlarged projection of pictures projected from this multiplicity of projection units wherein these drive devices 60a through 60i used in this system contain a rotary drive device, such as a motor, and a rotary power transmission mechanism. Furthermore, Nishio teaches how the height of the projectors within the projection units and the angle of the projected light can be freely adjusted in the vertical and horizontal directions wherein some examples of such rotary transmission mechanisms are gear trains, chain gears, and cam-to-cam followers (page 7, paragraph 0096).

Regarding **claim 10,** in further discussion of claim 1, Otsuki discloses two opposite hook bodies [Fig. 14; 36] are pivotally disposed on lower side of base board and pulled by resilient members [Fig. 14; 37] to keep in an inward biased state, inner side of each hook body being formed with a guide notch, the base board being formed with guide slots corresponding to and overlapping the guide notches, each guide slot having a close end and an open end, the lower casing being formed with locating posts respectively corresponding to the sliding positions of the

guide notches and guide slots, whereby when the base board is slid and retracted into the housing, the close ends of the guide slots abut against the locating posts to restrict the base board, and reversibly, when the base board is slid outward from the housing and the open ends of the guide slots are moved to get close to the locating posts, the guide notches of the hook bodies instantaneously hook and locate the locating posts (see Column 11, Line 10 - Column 12, Line 32).

Regarding **claim 11**, in further discussion of claim 1, Otsuki discloses the bottom of the display panel is formed with multiple pivot holes, gears being mounted at least one of the pivot holes [Fig. 14; 44] for meshing with the transmission mechanism (see Column 11, Line 10 - Column 12, Line 32).

Regarding **claims 12 and 13**, in further discussion of claim 11, Nishio teaches this concept by teaching a multivision device configured by stacking a plurality of projection units, which accommodate rear projection projectors, both horizontally and vertically, and that displays one large screen picture by enlarged projection of pictures projected from this multiplicity of projection units wherein these drive devices 60a through 60i used in this system contain a rotary drive device, such as a motor, and a rotary power transmission mechanism. Furthermore, Nishio teaches how the height of the projectors within the projection units and the angle of the projected light can be freely adjusted in the vertical and horizontal directions wherein some examples of such rotary transmission mechanisms are gear trains, chain gears, and cam-to-cam followers (page 7, paragraph 0096).

Regarding **claim 14-18**, in further discussion of claim 10, Nishio teaches this concept by teaching a multivision device configured by stacking a plurality of projection units, which accommodate rear projection projectors, both horizontally and vertically, and that displays one large screen picture by enlarged projection of pictures projected from this multiplicity of projection units wherein these drive devices 60a through 60i used in this system contain a rotary drive device, such as a motor, and a rotary power transmission mechanism. Furthermore, Nishio teaches how the height of the projectors within the projection units and the angle of the projected light can be freely adjusted in the vertical and horizontal directions wherein some examples of such rotary transmission mechanisms are gear trains, chain gears, and cam-to-cam followers (page 7, paragraph 0096).

Regarding **claims 19,** in further discussion of claim 10, Otsuki discloses a hooking notch [Fig. 14; 36] is formed on the lower casing, whereby when the lower casing is moved out of the housing, the hooking notch hooks the press post of the hook body so that the base board is together driven to move outward (see Column 11, Line 10 - Column 12, Line 32).

Furthermore, Otsuki discloses two opposite hook bodies [Fig. 14; 36] are pivotally disposed on lower side of base board and pulled by resilient members [Fig. 14; 37] to keep in an inward biased state, inner side of each hook body being formed with a guide notch, the base board being formed with guide slots corresponding to and overlapping the guide notches, each guide slot having a close end and an open end, the lower casing being formed with locating posts respectively corresponding to the sliding positions of the guide notches and guide slots, whereby

when the base board is slid and retracted into the housing, the close ends of the guide slots abut against the locating posts to restrict the base board, and reversibly, when the base board is slid outward from the housing and the open ends of the guide slots are moved to get close to the locating posts, the guide notches of the hook bodies instantaneously hook and locate the locating posts (see Column 11, Line 10 - Column 12, Line 32).

Furthermore, Otsuki discloses each hook body has a press post, whereby by means of shifting the press posts in a direction reverse to the hooking direction, the locating posts are released from the hooking of the hook bodies (see Fig. 7; Column 6, Lines 14-65).

Regarding **claim 20**, in further discussion of claim 10, Otsuki discloses the first gear set is arranged in a space defined by a shell plate and the lower casing, the first gear set including a power source, a spiral gear, a main gear, a subsidiary gear, a driven gear, a first driven gear, a bevel gear, a second driven gear and a third driven gear [Fig. 5; 45, 46, 50 & 51], the spiral gear being fitted on the power source, the power generated by the power source being transmitted to sequentially drive the main gear, the subsidiary gear, the driven gear, the first driven gear, the bevel gear, the second driven gear and the third driven gear, the third driven gear extending out of the lower casing to engage with the gear of the display panel (see Column 4, Lines 25-46 and Column 11, Line 10 - Column 12, Line 32).

Regarding **claim 21**, in further discussion of claim 20, Otsuki discloses a sensing unit [Fig. 11; 55] is disposed beside the first gear set, the sensing unit including multiple circuit elements, a first sensory gear, a movable plate and a second sensory gear, the movable plate

being pivotally mounted on back face of the lower casing near the center thereof, the first sensory gear being engaged with the driven gear for sending the rotational signal of the driven gear to the circuit elements for the program processing unit to take the data of rotational angle, the movable plate being provided with a projecting post, a leaf spring and a toothed edge for meshing with the second sensory gear, whereby when the movable plate is swung, the second sensory gear detects the movement of the toothed edge and via the circuit elements sends the signal to the program processing unit, the projecting post and the leaf spring being correspondingly slidably inlaid in the guide channel of the base board, a projecting post being disposed on the lower casing longitudinally corresponding to the projecting post of the movable plate and slidably inlaid in the guide channel of the base board (see Column 11, Line 10 - Column 12, Line 32).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bang (US 6,522,530), Lu (US 6,651,893), and Onodera (US 6,710,707), are cited to further evidence the state of the art pertaining to adjustable display devices.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uchendu O. Anyaso whose telephone number is (703) 306-5934. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Uchendu O. Anyaso

05/28/2004

CHANH NGUYEN
PRIMARY EXAMINER